

WHAT IS CLAIMED IS:

- 1 1. A propulsion device comprising;
2 a preheating means provided in a combustion chamber,
3 a liquid fuel supply means opening toward said combustion chamber,
4 a surface area increasing means provided in said combustion chamber,
5 an oxidizer supply means opening toward said combustion chamber,
6 an oxidizer storing means connected to said oxidizer supply means and
7 hydrogen peroxide stored in said oxidizer storing means.
- 1 2. A propulsion device as claimed in Claim 1, wherein at least one
2 of an orientation to which said liquid fuel supply means opens and an
3 orientation to which said oxidizer supply means opens includes a vector
4 toward said surface area increasing means.
- 1 3. A propulsion device as claimed in Claim 1 or 2, further
2 comprising a preheating means, that supplies heat, connected to said
3 surface area increasing means.
- 1 4. A propulsion device as claimed in Claim 1, wherein said surface
2 area increasing means is formed in any one shape selected from the group
3 of a net shape, a laminated net shape in which a plurality of nets are
4 laminated and a honeycomb shape.
- 1 5. A propulsion device as claimed in Claim 1, wherein a chemical
2 species of said surface area increasing means is any one or more selected
3 from the group of silver, platinum, palladium, ruthenium and iridium.
- 1 6. A propulsion device as claimed in Claim 5, wherein said surface
2 area increasing means comprises a support made of a ceramic and a

3 catalyst arranged in contact with said support and a chemical species of
4 said catalyst is any one or more selected from the group of silver, platinum,
5 palladium, ruthenium and iridium.

1 7. A flying object comprising a propulsion device as claimed in
2 Claim 1.

1 8. A flying object as claimed in Claim 7, wherein said flying object
2 is any one of an artificial satellite, an on-trajectory working station, a lunar
3 probe, a planet probe, a guided aerospace craft and a launch vehicle.

1 9. A propulsion device igniting method comprising the steps of;
2 preheating a surface area increasing means provided in a
3 combustion chamber (a preheating step),

4 supplying a liquid fuel into said combustion chamber (a fuel supply
5 step),

6 causing said liquid fuel to contact with said surface area increasing
7 means (a fuel contacting step),

8 supplying an oxidizer into said combustion chamber (an oxidizer
9 supply step) and

10 causing said oxidizer to contact with said surface area increasing
11 means (an oxidizer contacting step).

1 10. A propulsion device igniting method as claimed in Claim 9,
2 wherein at least one of an orientation to which said liquid fuel is supplied
3 and an orientation to which said oxidizer is supplied includes a vector
4 toward said surface area increasing means.

1 11. A propulsion device igniting method as claimed in Claim 9 or
2 10, wherein said preheating step is a step of supplying said surface area

3 increasing means with heat.

1 12. A propulsion device igniting method as claimed in Claim 9,
2 wherein a chemical species of said oxidizer is hydrogen peroxide.